

Surgical therapy should be recommended if a testis has not descended by 2 years of age.

Malignant lesions of the testis are 40 times more common in patients with undescended testes than in patients whose testes have descended normally. Medical or surgical therapy does not affect the frequency of occurrence of malignant tumors; however, the diagnosis can be made earlier if the testis is in the scrotum where the tumor can be palpated. A malignant lesion will develop in approximately 1 in 1,100 patients with undescended testis, most commonly in the third decade of life. Spermatogenesis is increased by orchidopexy; however, the average sperm count in a man who has had undescended testis will be lower than normal. There appears to be an inherent abnormality in undescended testes that is not altered by medical or surgical descent.

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Treatment of Metatarsus Adductus in Infants

METATARSUS ADDUCTUS or, more properly, metatarsus varus is a medial deviation of the forefoot, sometimes referred to as "skew foot" or "one third of a club foot." It generally refers to a condition in which the forefoot is supinated and adducted, while the hindfoot is in a slight valgus position.

The incidence as reported by Wynne-Davies is 1 per 1,000 live births, with afflicted females outnumbering afflicted males 4 to 3. These figures may be low as they were obtained from hospital records, and this condition does not always require hospital level attention. Metatarsus varus is generally quoted as being ten times more frequent than club foot, though the incidence of club foot is also reported as 1 per 1,000 live births from the same Wynne-Davies data. There is no clear pattern of inheritance and there is no relation of incidence to intrauterine environmental factors.

Metatarsus varus may present clinically three ways—as a stiff or fixed adduction, supple or "hooked" forefoot or dynamic forefoot adduction.

In the stiff variety, always present at birth, the forefoot is extremely adducted, the foot imprint shows a high arch, the great toe is medially deviated, the medial foot is creased, the lateral foot

shows a prominent fifth metatarsal base and the forefoot is not passively correctable to a neutral axis. Manual stroking of the lateral aspect of the foot while firmly holding the heel does not elicit a peroneal muscle reflex, which corrects the forefoot to neutral.

The flexible, or supple, metatarsus varus, with varying degrees of the above deformities, is passively overcorrectable; manual stroking of the lateral foot elicits spontaneous correction to neutral. This type is also usually present at birth and usually corrects spontaneously. This explains such reports as Rushforth's in which 86 percent of 130 patients were found to have normal feet without treatment at an average follow-up of 7 years. Ponseti and Becker noted that only 11.6 percent of 379 patients needed casting. A few flexible cases may stiffen and require treatment later.

The dynamic forefoot adduction group may not have a concave varus foot at rest, but will have varus forefoot on weight-bearing. In these feet, dynamic deforming forces, such as an overactive abductor hallucis or an anomalous posterior tibial insertion, may be the cause. This explains the pediatrician's shock at seeming to miss some severe adducted forefeet until the children begin to walk. These usually spontaneously improve, but may resist casting or passive correction (since the deformity is dynamic) and may need surgical muscle release if persistent into the third or fourth year.

Treatment of stiff metatarsus varus with serial casting is warranted as soon as the condition is recognized. Early orthopedic referral is prudent. All other forms of flexible metatarsus varus will usually correct spontaneously during the first three years of life. Parental stretching is not effective in a stiff foot and unnecessary in a supple foot, and, if improperly applied, may produce a "Z" foot.

There is agreement that reverse-last shoes will not correct the stiff foot, and are unnecessary in the spontaneously self-correcting flexible deformity. Shoes may be of temporary assistance after casting for maintenance, though it is generally agreed that mild overcorrection is the best endpoint in casting.

The Denis-Browne bar with shoes should be reserved for varus deformity that is accompanied by severe internal tibial torsion, and probably only after 18 months to 2 years of age. the bar can actually cause an externally rotated or valgus

hindfoot without correction of the forefoot adduction, resulting in a Z or so-called serpentine foot.

If stiffness persists beyond age 3 or 4 years, surgical soft tissue midfoot release or bony metatarsal osteotomy may become necessary.

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Antimicrobial Therapy for Acute Otitis Media in Children

THE PREFERRED ANTIMICROBIAL agent for a child with acute otitis media must be active against *Streptococcus pneumoniae* and *Hemophilus influenzae*. Group A streptococcus and *Staphylococcus aureus* are infrequent causes of acute otitis media and need not be considered in initial therapeutic decisions. Gram-negative enteric bacilli must be considered when otitis media occurs in newborn infants, in patients with depressed immune response and those with suppurative complications of chronic otitis media.

Most antimicrobial agents effective in the treatment of otitis media can be found in significant concentrations in middle ear fluid. After administration of the agent, antimicrobial activity occurs promptly in middle ear fluid and duration is approximately the same as in serum.

Usual dosage schedules of ampicillin, amoxicillin trihydrate, cefaclor and trimethoprim-sulfamethoxazole (TMP-SMZ) produce concentrations of antimicrobial activity in middle ear fluid that are sufficient to inhibit *Streptococcus pneumoniae* and most strains of *H influenzae*. Concentrations achieved in middle ear fluid by penicillin V, the erythromycins and clindamycin hydrochloride are sufficient to inhibit *S pneumoniae* but are not adequate to inhibit most strains of *H influenzae*.

Amoxicillin or ampicillin are still the drugs of choice for initial treatment of otitis media because they are active both in vitro and in vivo against *S pneumoniae* and *H influenzae* and are less expensive than alternative regimens. The current incidence of ampicillin-resistant *H influenzae* is low, approximately 3 percent to 8 percent of cases of otitis media, and does not require a change in initial therapy. Other drugs that are satisfactory

include TMP-SMZ, cefaclor and combinations of a sulfonamide and penicillin G, penicillin V, erythromycin or clindamycin. For the child who is allergic to penicillin, TMP-SMZ, cefaclor or the combination of erythromycin or clindamycin and a sulfonamide provide equivalent antimicrobial coverage.

With appropriate antimicrobial therapy, most children with acute otitis media due to one of the common bacterial pathogens feel considerably better within 48 to 72 hours. If symptoms have not lessened, the patient should be reexamined. Toxicity with persistent or recurrent fever or otalgia should prompt tympanocentesis to identify the causative organism; the appropriate antimicrobial agent may then be chosen based on results of culture of middle ear fluid. If signs persist but the child is not toxic and aspiration is not performed, the initial antimicrobial regimen should be changed to one that is effective for uncommon organisms, including β -lactamase-producing *H influenzae*. Recent studies indicate that if ampicillin or amoxicillin was initially given, then administration of TMP-SMZ, erythromycin-sulfisoxazole or cefaclor is usually successful. TMP-SMZ is probably ineffective when group A β -hemolytic streptococcus or *Staphylococcus aureus* is the causative organism.

The bacteriology of middle ear infection in children who have recurrent episodes of acute otitis media is similar to that for first episodes; the predominant pathogens are *Streptococcus pneumoniae* and nontypable strains of *H influenzae*. Thus, a child with a recurrent episode of otitis media should be treated initially with the same antimicrobial regimen as a child with a first episode of middle ear infection.

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Laboratory Aids in the Diagnosis of Testicular Torsion

TESTICULAR TORSION results in the sudden devascularization of the testicle. In most cases this condition must be differentiated from either epididymitis or torsion of the testicular appendages.

Since epididymitis is almost always associated